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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,065

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Shigenobu Yoshida

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EXAMINER

TRAN, THAO T

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,065	<b>Applicant(s)</b> YOSHIDA ET AL.	
	<b>Examiner</b> Thao T. Tran	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/8/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION*****Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7, 9, 12-28 of copending Application No. 10/563,299. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims in the copending application overlaps that of the instant claims, rendering them obvious over each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8-12, 14-17, 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ota et al. (US Pat. 6,866,949).

Ota discloses a gas barrier composite film, comprising a substrate film 2, a metal oxide thin layer 4 on the substrate film, and an overcoat 5 (see Figure 3). The substrate film may be plastic, including resins of polyester, polyamide, and polyolefin (see col. 2, ln. 34-48; col. 7, ln. 51-58). The thin layer may be of silicon oxide or aluminum oxide (see col. 8, ln. 56-58; Examples). The overcoat may be made of a polysiloxanes, a polyester, a urethane- or an acrylic-based resin (see paragraph bridging col. 12-13; col. 15, ln. 58-62). When the overcoat is made of a polysiloxane, the composition is composed of at least one silane coupling agent and a cross-linkable compound. The cross-linkable compound has an organic functional group, comprising a carboxyl group containing polymer such as a polyacrylic acid or an oxazoline group containing polymer (see col. 13, ln. 1-4). Thus, although Ota does not teach the specific ratio of the carbon atom number derived from the carboxyl groups to the carbon atom number constituting the surface of the overcoat layer, since the composition in the overcoat of Ota is the same as that in the presently claimed coating layer (C), the ratio of the carbon atom numbers would inherently be the same.

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A primer layer formed of the same materials as in the overcoat layer (see col. 8, ln. 51-52), which reads on the presently claimed anchor coat layer.

With respect to the properties of the gas barrier composite laminate, since the laminate comprises the same layers as presently claimed, it would inherently have the same properties such as hardness and oxygen permeability.

5. Claims 8-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al. (US Pat. 5,856,017).

Matsuda discloses a gas barrier film, comprising a plastic film and a thin comprising an oxide film (see abstract). The plastic film is made of polymers including polyethylene, polypropylene, polyethylene terephthalate (PET), nylon, polyamide, polysulfone, polyphenylene oxide, and combinations thereof (see col. 3, ln. 20-29). The thin film contains an oxide such as silicon oxide and aluminum oxide (see co. 3, ln. 38-52).

Thus, although Matsuda does not teach the specific ratio of the carbon atom number derived from the carboxyl groups to the carbon atom number constituting the surface of the overcoat layer, since the composition in the overlayer of Matsuda is the same as that in the presently claimed coating layer (C), the ratio of the carbon atom numbers would inherently be the same.

With respect to the properties of the gas barrier composite laminate, since the laminate comprises the same layers as presently claimed, it would inherently have the same properties such as hardness, oxygen permeability, and adhesion strength.

Matsuda further teaches the barrier film can further include other organic polymer films. An example would be a barrier film containing a polypropylene film, an adhesive layer, a silicon

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oxide thin layer, a polyethylene terephthalate (PET) film, an adhesive layer, a printed layer, and a PET film (see col. 8, ln. 10-17). Other embodiments are also described (see col. 8, ln. 27-47).

Matsuda further teaches a heat seal layer added onto the barrier film (see claims 4 and 6); and an anchor coating between the plastic film and the thin film (see col. 6, ln. 60-65). Thus the second PET layer would be between the printed layer and the heat seal layer.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota or Matsuda as applied above and further in view of Satoh et al. (US Pat. 6,194,061).

Although Ota teaches the use of polyester and polyurethane in the overcoat layer, the reference does not teach the combination of these two resins, or the molecular weight of each resin.

Matsuda only teaches the use of polyester in the overcoat layer.

Satoh discloses a coating layer, comprising a polyester resin and a polyurethane resin that shows superior adhesion (abstract). The polyester resin has a molecular weight of 5,000-50,000 (see col. 6, ln. 7) and when grafted, a molecular weight of 500-50,000 (see col. 8, ln. 14), overlapping the presently claimed range. The polyurethane having a molecular weight of about 300-20,000 (see col. 11, ln. 32-34), significantly overlapping the presently claimed range.

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Therefore, it would have been obvious to one of ordinary skill in the art to use Sato's combined polyester and polyurethane resins with the gas barrier taught by Ota or Matsuda to improve adhesion to the inorganic layer as well as superior resistance to water and solvent (see Satoh, col. 1, ln. 10-13).

With respect to the properties of the polyester and polyurethane resins, since the references teach the same polymer resins, they would inherently have the same properties, such as the glass transition temperature, oxygen permeability, and acid value.

Ota teaches the presence of a silane coupling in the overcoat layer as presented above. The silane coupling agent is an amino alkyl silane (see col. 13, ln. 5-8).

Although Ota does not teach a specific amount of the silane coupling in the overcoat layer, it would have been obvious to one of ordinary skill in the art that the amount of the silane coupling in the overcoat layer would have been determined by routine experimentation in order to obtain the desired results.

The crosslinkable compounds in Ota include a triglycidyl tris(2-hydroxy ethyl)isocyanurate and other polyisocyanates (see col. 14, ln. 1-22) in an amount of 0.1-30% (see col. 14, ln. 21, 28). Therefore, it would have been obvious to one of ordinary skill in the art that the amount the polyisocyanate with respect to the total hydroxyl equivalent of the polyester and polyurethane resins would have been adjusted in order to obtain the desired results.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota or Matsuda and Satoh as applied above and further in view of Hall et al. (US 2002/0009564).

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The Ota, Matsuda, and Satoh are silent with regard to a fatty acid, fatty ester, or fatty amide being added to the polyester resin layer. Fatty acid amides are well-known slip additives to polyester, as evidenced by Hall et al. [0002].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to add fatty acid amides to the polyester resin layer to improve its slip and, therefore, handling properties. Given that the range claimed by Applicant is so broad, one of ordinary skill would have naturally arrived at values within the range during routine optimization of the amount used.

#### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thao T. Tran/  
Primary Examiner, Art Unit 1794

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